

Claims

1. Formulations for topical applications comprising pigments obtainable by
agitating a suspension comprising one or more inorganic pigments and
silver oxide, in order to reduce undesirable side-effects caused by
microorganisms.
2. Formulations according to claim 1, characterized in that the undesirable
side effects caused by microorganisms are dandruffs, acne and/or
malodour.
3. Formulations according to claim 1, characterized in that the formulation
is in the form of solutions, suspensions, emulsions, pasta, ointments,
gels, creams, lotions, powders, oils, pencils, deodorants-cremes, gels,
lotions, emulsions, deodorant sticks, Roll-ons, sprays, pump sprays or
lacquers.
4. Formulations according to claim 1, characterized in that they comprise
at least one compound selected from the group consisting of suitable
substrates for microorganisms.
5. Formulations according to claim 4, characterized in that the suitable
substrate for microorganisms is preferably selected from the group
consisting of alkanes, alkenes, alkynes, with or without functional
groups, sugars, polyols, alcohols, saturated or unsaturated carboxylic
acids, proteins, amino acids, water, fatty acids, waxes, fats, mineral oils,
salts, hormones, steroids, vitamins and/or derivatives or salts thereof.
6. Formulations according to claim 1, characterized in that the inorganic
pigment is platelet-shaped, spherical or needle-shaped.

7. Formulations according to claim 1, characterized in that the inorganic pigments are inorganic white pigments, inorganic coloured pigments, inorganic black pigments, effect pigments, luminous pigments, magnesium carbonate, mica, SiO_2 , TiO_2 , aluminium oxide, glass, micaceous iron oxide, oxidised graphite, aluminium oxide-coated graphite, basic lead carbonate, barium sulphate, chromium oxide or MgO .
8. Formulations according to claim 7, characterized in that the effect pigments are based on substrates.
9. Formulations according to claim 8, characterized in that the substrates are selected from the group of natural or synthetic mica, SiO_2 , TiO_2 , BiOCl , Aluminium oxide, glass, micaceous iron oxide, graphite, oxidised graphite, aluminium oxide coated graphite, basic lead carbonate, barium sulphate, chromium oxide, BN , MgO , magnesium fluoride, Si_3N_4 , and/or metals.
10. Formulations according to claim 9, characterized in that the substrates additionally are coated with one or more layers of BiOCl and/or transparent, semitransparent or opaque, selectively or nonselectively absorbing or nonabsorbing metal oxides, metal suboxides, metal oxide hydrates, metals, metal nitrides, metal oxynitrides, metal fluorides and/or mixtures of these materials.
11. Formulations according to claim 10, characterized in that the one or more layers of BiOCl and/or transparent, semitransparent or opaque, selectively or nonselectively absorbing or nonabsorbing metal oxides, metal suboxides, metal oxide hydrates, metals, metal nitrides, metal oxynitrides, metal fluorides and/or mixtures of these materials are arranged as alternating layers of transparent, semitransparent or opaque, selectively or nonselectively absorbing or nonabsorbing metal

- oxides, metal suboxides, metal oxide hydrates, metals, metal nitrides, metal oxynitrides, metal fluorides and/or mixtures of these materials or BiOCl with a refractive index $n > 1.8$ and transparent, semitransparent or opaque, selectively or nonselectively absorbing or nonabsorbing
- 5 metal oxides, metal suboxides, metal oxide hydrates, metals, metal nitrides, metal oxynitrides, metal fluorides and/or mixtures of these materials with a refractive index $n \leq 1.8$.
- 10 12. Formulations according to claims 10 and 11, characterized in that the outer layer of the inorganic pigment comprises a transparent, semitransparent or opaque, selectively or nonselectively absorbing or nonabsorbing metal oxide, metal suboxide, metal oxide hydrate and/or mixture of these materials.
- 15 13. Formulations according to claim 10 to 12, characterized in that the transparent, semitransparent or opaque, selectively or nonselectively absorbing or nonabsorbing metal oxides, metal suboxides, metal oxide hydrates, metals, metal nitrides, metal oxynitrides, metal fluorides and/or mixtures of these materials additionally contain organic and/or
- 20 inorganic colorants or elements as dopant.
- 25 14. Formulations according to claim 1, characterized in that the inorganic pigment comprises spherical particles or spherical capsules of metal oxides, BiOCl, magnesium carbonate, graphite, oxidised graphite, aluminium oxide-coated graphite, basic lead carbonate, barium sulphate, BN, magnesium fluoride, Si_3N_4 and/or metals.
- 30 15. Formulations according to claim 14, characterized in that the spherical particles or capsules are coated with one or more layers of transparent, semitransparent or opaque, selectively or nonselectively absorbing or nonabsorbing metal oxides, metal suboxides, metal oxide hydrates,

metals, metal nitrides, metal oxynitrides, metal fluorides and/or mixtures of these materials.

5 16. Formulations according to claim 1, characterized in that the inorganic pigments are additionally coated with a protective coating layer.

10 17. Formulations according to claim 16, characterized in that the protective coating is selected from silica, silicates, borosilicates, aluminosilicates, alumina, aluminum phosphate, or mixtures thereof.

15 18. Formulations according to claim 1, characterized in that the silver oxide is substituted by silver halogenide, silver nitrate, silver sulfate, silver carboxylates, silver carbonate, silver citrate, copper oxides, copper sulfide, copper nitrate, copper carbonate, copper sulfate, copper halogenides, copper carboxylates, zinc oxide, zinc sulfide, zinc silicate, zinc acetate, zinc chloride, zinc nitrate, zinc sulfate, zinc gluconate, zinc citrate, zinc phosphate, zinc propionate, zinc salicylate, zinc lactate, zinc oxalate, zinc iodate, zinc iodide or combinations thereof.

20 19. Formulations according to claims 1 to 18, characterized in that they additionally comprise preservatives and antimicrobial agents.

25 20. Formulations according to claims 1 to 19, characterized in that they additionally comprise antibiotics.

30 21. Formulations according to claim 20, characterized in that the antibiotics are selected from the group of Beta-lactam, Vancomycin, Macrolides, Tetracyclines, Quinolones, Fluoroquinolones, Nitrated compounds, Aminoglycosides, Phenicol, Lincosamids, Synergistins, Fosfomycin, Fusidic acid, oxazolidinones, Rifamycins, Polymixynes, Gramicidins, Tyrocydine, Glycopeptides, Sulfonamides or Trimethoprim

22. Formulations according to claim 1 or 21, characterized in that they additionally comprise one or more UV filters.
- 5 23. Formulations according to claims 1 to 22, characterized in that they additionally comprise at least one self-tanning agent.
24. Formulations according to claim 1 to 23, characterized in that they additionally comprise dyes and coloured pigments.
- 10 25. Formulations according to claim 1 to 24, characterized in that they additionally comprise at least one antioxidant.
26. Formulations according to claim 1 to 25, characterized in that they additionally comprise vitamins.
- 15 27. Formulations according to claim 1 to 26, characterized in that they additionally comprise skin-protecting or skin-care active ingredients.
- 20 28. Formulations according to claim 1 to 27, characterized in that they additionally comprise at least one photostabiliser.
29. Process for the preparation of formulations according to claim 1 comprising the steps
- 25 c) agitating a suspension comprising one or more inorganic pigments and silver oxide and
- d) mixing the pigment a) with further ingredients suitable for formulations.
- 30 30. Use of formulations for topical applications and/or pigments according to claim 1 for the prophylaxis and/or treatment of acne.

31. Use of formulations for topical applications and/or pigments according to claim 1 for the prophylaxis and/or treatment of dandruffs.

5 32. Use of formulations for topical applications and/or pigments according to claim 1 for the prophylaxis and/or treatment of malodour.

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